October 1964

EMO

NATIONAL DIGEST

EMO Projects at Suffield
The Swedish Civil Defence Organization
Personal Services—Emergency Welfare
Newfoundland Forest Fire Plan
Report by Special Committee on Defence
Statement on EMO Estimates 1964-65
Defence Statement on National Survival Role

EMERGENCY MEASURES ORGANIZATION

EMO NATIONAL DIGEST

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In addition to publishing articles which reflect Canadian Government policy the Digest may also publish articles by private individuals on subjects of current interest to the emergency measures programme. The views of these contributors are not necessarily subscribed to by the Federal Government.

Director: P. A. FAGUY *Editor:* A. M. STIRTON

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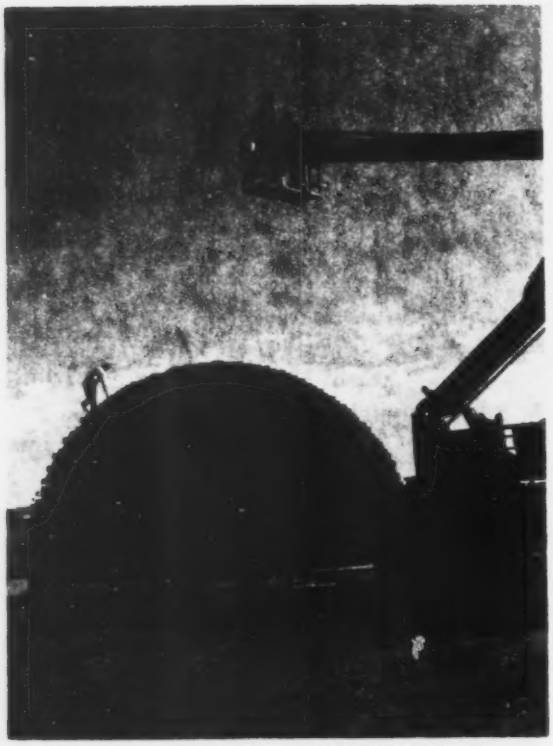

SUFFIELD'S 500 TONS OF T.N.T.

...AND AFTER

REPORT ON EMO PROJECTS IN SUFFIELD TEST

by M. ZELMAN, Survival Planning (Technical)

On July 17th this year, a 500 Ton charge of TNT was detonated at the Suffield Experimental Station of the Defence Research Board as part of a continuing programme of research on the target effects of shock and blast. This detonation was organized on a tri-partite basis with the United States and the United Kingdom participating, each country having their own test programme in a different sector of the test site. The Emergency Measures Organization had three primary objectives of study, fibreglass shelters, blast doors and blast valves.

THE connection between our different projects in this test is inherent in one of the basic requirements of federal EMO, i.e., to have a number of tested designs of blast shelters and components for civil use available at all times. This requirement calls for tests of structures on an ad hoc basis for specific conditions applicable at the test site in case of buried structures; design methods for components where the loading history can be predicted; and operational tests of components which have been found basically satisfactory but require improvements in details.

Fibreglass Shelter

Our work to date has developed a basically satisfactory concrete shelter as well as one of corrugated steel, both of which have been tested at Suffield. The designs can now be issued on request to anyone requiring this type of protective structure. On looking at the projected cost and the potential ease of manufacture anywhere in Canada, fibreglass began to look very attractive as a material for use in shelter construction and in the manufacture of specific components. Since the physical properties of the material are not too well known and the loading parameters on a buried structure cannot be predicted with any degree of accuracy, our development work in this field consists of a series of 'ad hoc' tests which we started last year by testing a number of approximately 1/10th scale models. These models responded fairly satisfactorily and led us to produce the full scale prototypes used in the present test. The structures under test were of a corrugated drum type configuration with the ends domed out as shown in Figure 1, page 2. During the test, one access only was provided to allow instrumentation to be installed. The operational shelter would also have an emergency exit. Each structure consists of eleven units weighing a maximum of approximately 150 lbs. each so that they can be erected without the use of mechanical equipment. The joints, with a fibreglass packing to provide

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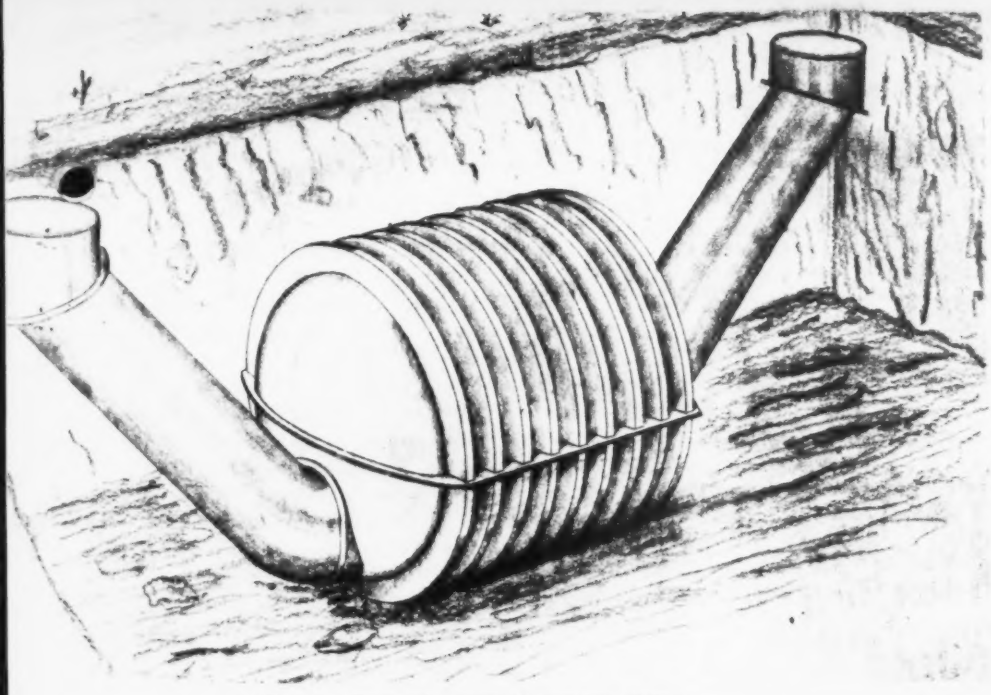

Figure 1. Perspective view of complete shelter.

water resistance are bolted together. It should be pointed out that these are soil structures, i.e., their strength is largely dependent on support from the surrounding backfill and consequently great care is required in the placing and compaction of the backfill.

Although our interest in civil blast protection is limited to approximately 30 p.s.i. overpressure, these shelters were tested at considerably higher p.s.i. levels. These higher levels allowed studies of behaviour and mode of failure and also partially compensated for the much shorter duration of pressure experienced in this trial than would be the case for a megaton burst. The results of the test were very satisfactory in that none of the shelters tested showed any significant damage, although some details will probably be changed as a result of our experience.

Fibreglass Blast Door

We are at present in the fortunate position of having a reasonably satisfactory blast door which has been tested but, in the interests of economy, we decided to investigate a new type of door with certain work-adsorbing characteristics. This new design consists of a fibreglass plate bonded to a neoprene gasket which in turn is bonded to a light steel angle frame. (*See* Figure 2.) This type of door would operate by deflection of the thin plate without in any way distorting the door frame or giving rise to any possibility of jamming.

The results of the tests on these doors rather surpassed expectations in the close agreement between the predicted and actual behaviour and early studies indicate we are now reasonably satisfied that both the design procedures used and the doors themselves, are satisfactory.

Blast Valve

There are a considerable number of valves of varying degrees of complexity and fairly high cost on the market. The present valve —(*see* Figure 3)—under consideration has already been tested and found to be satisfactory. The present series of tests is primarily directed to improving details and lowering the cost of individual parts. The test was reasonably satisfactory but not yet conclusive to the point where design can be frozen. Further improvement still appears possible.

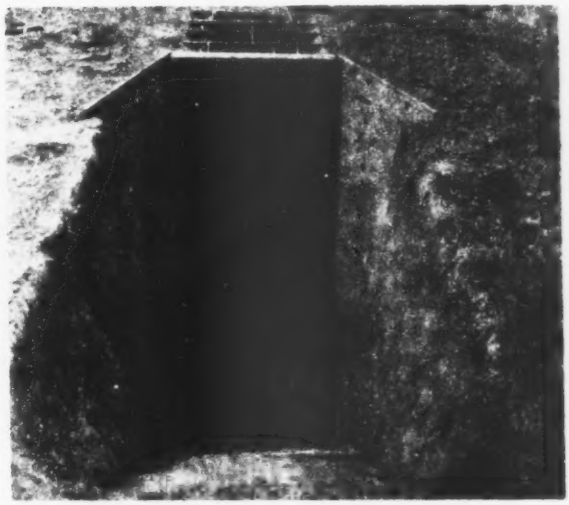

Figure 2. Door in position before trial.

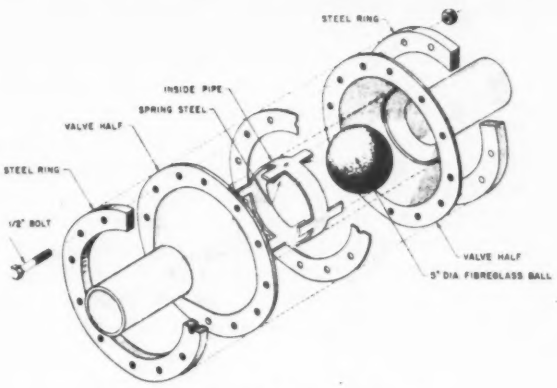

Figure 3. Perspective view of blast valve.

THE SWEDISH CIVIL DEFENCE ORGANIZATION*

Essential data with an introduction by Director General Åke Sundelin

Civil defence may be said to be full-grown in Sweden, as the organization was born in 1937, and the Swedes since the middle of the fifties are talking and thinking more of a total defence system, in which civil defence is looked upon as a branch as important as its long ago established military brother-authorities—perhaps in certain cases of war the most important branch. If civil defence fails, military defence might be meaningless.

The main differences between Swedish civil defence and most civil defence systems in other countries are:

No voluntary recruiting but enrolment entirely on the basis of the so-called civil defence obligation—you may say that the men and women in the organization are all conscripts.

A detailed evacuation planning concerning about 3.5 million people—almost half the population.

A vast net-work of so-called standard shelters, mostly in the out-skirts of the built-up areas and paid by private means, combined with a system of publicly defrayed rock shelters in the central parts of the biggest towns.

The rest of the organization with its local relief corps with different service branches represented and its regional mobile columns is more or less the same as in other quarters where civil defence is part of the program.

This last component—the rescue and relief organization—is at the moment being modernized, since the new weapons made the methods and administration a little obsolete. The object of this account is to tell what this modernized Swedish civil defence is and what it is aiming at.

ÅKE SUNDELIN, *Director General, Swedish Civil Defence Organization*

Smaller but More Effective Organization of Relief Activities

In March 1959 a motion was put before the Riksdag concerning the future administration and organization of civil defence in Sweden.

The proposition led to the following decision. The civil defence relief activities are to be restricted to such measures as call for uniform direction during and immediately following an attack. The responsibility for the subsequent resumption of the community's functions is to rest with the permanent social organs. When the evacuees have been received in the billeting district and had a dwelling assigned to them, the responsibility for them is taken over by the community organs normally having the responsibility for the care of the inhabitants.

Both of these principles implied that certain tasks which had previously been entrusted to the civil defence were transferred to the municipalities.

For the rest, the following decisions were taken concerning the tasks of the civil defence:

The keeping of order and guarding are to remain civil defence tasks as long as there is no central police authority to direct preparatory work in time of peace (a proposition concerning a police organization reform will probably be put in force from 1st July 1964.

The security tasks that had been assigned to the civil defence were transferred to the police.

The civil defence is to be responsible for the clearing of debris and repairs only when these are directly connected with the saving of life.

The civil defence is to be responsible for protective measures against radioactivity.

Removal and demolition of goods and machines etc were assigned to the economical defence authorities.

The organization of civil defence relief activities was radically revised. The size of the organization with respect to both personnel and material was to be decided by the government authorities. That preliminary evacuation should have been carried out when it became necessary for the organization to start functioning was taken as the norm for the dimensioning of local civil defence.

The Riksdag's decision implied that the local organization was cut down to about 220,000 persons, which meant that the enrolled personnel was reduced to not quite half.

On the other hand, the organization was to be strengthened in several ways. It was observed that in an emergency and in wartime the personnel must, to a considerably greater extent than earlier, be kept constantly prepared for duty.

The local civil defence units might be reinforced not only with forces from the adjacent civil defence areas, but also through regional mobile columns recruited from military conscripts being transferred to civil defence.

Further, an increase in the number of conscripts with respite from military duty for allocation to the local civil defence was provided for. Finally it was also arranged that 700 to 800 reserve officers should be transferred to the civil defence for allocation to both the local civil defence and the mobile columns.

Besides the general civil defence, protection of public works was—with certain reservations—retained, while the Warden Service was eliminated. In connection herewith it was pointed out that all those persons liable for civil defence duties must be prepared to take part in rescue work. Stress was also laid upon the importance of the individual's ability to protect himself and help

* Published by the Royal Swedish Civil Defence Administration.

others independently of the civil defence organization. Practical possibilities ought therefore to be created for the individual citizen's training in self-protection.

The principles for the division of the country into civil defence areas were changed. The number of areas was hereby reduced from 352 to 114. Within the areas the civil defence was to be organized in six services, viz., the Command Service, the Rescue Service, the Fire-fighting Service, the Casualty and Ambulance Service, the ABC Service and the Constabulary and Guard Service.

In part new principles were drawn up for the training. The upper limit for the training period was set at 60 days for higher officers etc. For other personnel the training period was to be at most 30 days. The Government was to make more detailed regulations within these limits concerning the duration of the training period, it being assumed that the period should be made appreciably shorter for the majority than the maximum periods. The theoretical training was to be supplemented with practice drills. Higher officers and instructors were to receive their training at a permanent State civil defence school at Rosersberg not far from Stockholm. Here was also to be established a school for the personnel of the mobile columns. Lower ranking officers and others were to get their training at a number of field schools in different parts of the country.

The committee appointed to investigate the question of civil defence had recommended that the new civil defence should be built up during a 10-year period. However, no decisions were made in these respects. It was merely stated that the building-up process should be commenced in the budget year 1960/61.

On the basis of the decisions thus made, a new Civil Defence Act and new civil defence and training proclamations were drawn up in 1960.

Two Authorities Responsible in Peace-Time, Four in War-Time

In the Government the Minister of the Interior is responsible for civil defence. The central direction, however, is in the hands of the Civil Defence Administration, one of those central boards, which are of old standing in the Swedish government system and have a number of characteristics peculiar to Sweden. The Civil Defence Administration is not part of the department in question, but is within its own sphere in a sense autonomous and makes its own decisions.

The Administration has a Director-General as head and is organized in four offices: Organization, Technical, Training and Administrative Office. There is also a Bureau for Central Planning, as well as a Medical Chief Officer and a Military Liaison Officer. The training centres of civil defence receive orders and instructions from the Training Office.

Included in the Administration in council are also, besides the Director-General and the different Principal Assistant Secretaries, 4-6 lay representatives appointed by the Government, and the country's Chief Fire-brigade Inspector.

Associated with the Administration is a Women's Committee with representatives for women's voluntary, political and trade-union associations. The task of this committee is to create a positive attitude toward civil defence and to interest women in active participation. At the same time through the committee women have an opportunity of drawing the attention of the authorities to their lay opinions concerning civil defence.

The war-time organization of the Administration is on the whole the same as the peace-time one. War-time activities will be carried on at special war centres which have been prepared in peace-time.

The preliminary work concentrated on the provincial governments

Under the Civil Defence Administration the work is directed by the provincial governments, where business is dealt with at the Civil Defence Department with a Civil Defence Director as head. The department consists as a rule of an Organization Section, a Technical Section and a Personnel and Training Section. The Governor-General's office and the Provincial Government in Stockholm Province have a joint organ to deal with civil defence matters.

In war-time there may be an additional authority between the Civil Defence Administration and the provincial governments, viz., the Civil Defence Coordinator. The latter is head of a Coordination Area. With the exception of the provinces of Gotland, Västerbotten and Norrbotten, the country is divided into five such areas. These, each of which consists of several provinces, coincide on the whole with corresponding military areas. The Government appoints one of the provincial governors in the area as coordinator already in peace-time.

In war-time the coordinator is to combine the civil defence measures and other civilian activity in the area in concert with the Military Area Commander. The Civil Defence Administration may, furthermore, delegate certain tasks to the coordinators. In case of breakdown in communications the latter replace the Civil Defence Administration.

In peace-time the tasks of the coordinator are chiefly restricted to keeping himself informed of the planning of defence measures in the area and trying to assist in the coordination of the planning activities of different officer bodies. He has a special office at his disposal.

The Civil Defence Controller does not become a leader until a state of emergency is proclaimed

The provinces are divided into Civil Defence Areas, altogether 114 in the entire country. Gotland in itself constitutes a civil defence area. In the Stockholm civil

defence area are included, besides the City of Stockholm, also parts of the Province of Stockholm.

The division into civil defence areas is decided by the Government. As a rule the civil defence areas coincide with one or several police districts. In each area the civil defence is to be conducted by a Civil Defence Controller in states of emergency and war. The chief of police and the fire-brigade chief are bound to accept if called upon as civil defence controllers.

To facilitate the war-time command a civil defence area may be divided into two or more Civil Defence Districts, where the activity is directed by a District Deputy. Such a division may be required in the case of, for instance, a civil defence area with several bigger, more densely populated towns.

The civil defence controller and the district deputy direct activities from a Control Centre and District Centre respectively. Civil defence controllers and district deputies must keep themselves informed of the planning in peacetime. They must also go through courses of training and take part in exercises.

In municipalities in which the civil defence controller or district deputy does not have his own war-time centre, there must be a Municipal Deputy. The latter, under the civil defence controller or district deputy, shall direct the billeting and in certain cases also other civil defence activities in the municipality. He must also assist in coordinating the activities of municipal bodies with the civil defence. In war-time the municipal deputy directs activities from a centre of his own.

In each municipality a municipal body, e.g. the financial committee or the district council, must be commssioned to take charge of the civil defence tasks of the municipality. Larger municipalities generally appoint a special civil defence committee. In states of emergency and in war-time it may be made incumbent upon every municipality to appoint such a committee.

Six Service Branches in the Local Civil Defence

The main body of the general civil defence is formed by the local organization, which is completed by regionally organized mobile columns, an industrial plant protection and a works protection at state and private railways, state and bigger private power stations, in tele-communications, at civil air-ports and at military establishments.

It is the task of the local civil defence both to assist in preventive activity, chiefly evacuation, and to cope with damage and casualties after attack. In each civil defence area the organization must consist of the services, and within these the units, which are considered necessary with reference to the character of the area and other conditions. In the majority of the civil defence areas all six service branches are represented.

The personnel—the number of persons who are to be selected and enrolled for civil defence service—has been fixed for the local general civil defence by the government at a maximum of 225,000 persons, including a 10 per cent mobilization reserve. The distribution among the different service branches is as follows:

Common Service	44,800
Rescue Service	31,000
Fire-fighting Service	53,400
Casualty and Ambulance Service	39,000
ABC Service	20,000
Constabulary and Guard Service	36,000

The distribution of the personnel among the provinces is decided by the Civil Defence Administration and that among the civil defence areas by the provincial governments.

Command service

The personnel of the command service must assist the civil defence controller in conducting the preventive and relief activities. It also has charge of the alarm system, the observation and reporting of damage, and is responsible for the maintenance of radio and telephone services. In the command service is included the main part of the personnel manning the control centres. It also includes mobile command units for activity in the field. Such units are local commandants with field staffs, observation groups and command groups. A local commandant leads the combined units from different service branches in a damaged area.

Rescue service

The rescue service is intended to rescue persons shut up in shelters and collapsed buildings etc. or who are otherwise in distress. The work of clearing up debris and repair is performed by the rescue service only in so far as it is directly connected with the saving of life. Clearing up of debris and repair work on a longer view are the business of community organs having such activities in peace-time, chiefly the municipal technical works. The rescue service consists of rescue groups and heavy rescue groups, each of 8 men. They may be combined to form rescue platoons.

Fire-fighting service

The main task of the fire-fighting service is to take part in the rescue work first and foremost by delaying, preventing and extinguishing fires. As a subordinate task come the restricting and extinguishing of fires to reduce damage to property. The service is built up round a core of peace-time municipal fire brigades and consists for the most part of fire-fighting groups of 8 men that may be combined to form fire-fighting platoons. In the largest civil defence areas the latter may form fire-fighting companies.

Casualty and ambulance service

The task of the casualty and ambulance service is to take care of the injured, in close cooperation with the rescue service and the fire-fighting service. The activity includes first aid, sorting into categories according to

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the need for medical attention, treatment at dressing stations, dressing posts and block dressing posts set up by the service, as well as transport to emergency hospitals or other establishments for sick care. The treatment at dressing stations and dressing posts is intended chiefly to put the casualties in a fit state for transportation to hospitals situated outside the town or district in question. At the block dressing posts are treated only those who are less severely injured.

ABC service

The task of the units of the ABC service is to indicate gas and radicactive radiation and to undertake decontamination measures. The service must also assist in evacuation and billeting. Personnel from the ABC service are included in the control centres in order, amongst other things, to conduct the measures for protection against radioactivity. The ABC service otherwise consists of indicating groups and ABC groups, which latter may be combined to form ABC sections.

Constabulary and guard service

The constabulary and guard service—"the civil defence police"—is responsible for closing roads or fencing off buildings, regulating traffic and otherwise maintaining order in connection with other civil defence activities, and also for the guarding of important buildings or sites against espionage and sabotage. The personnel of this service enjoy the protection and authority of policemen. They are equipped with fire-arms.

The civil defence police must, in connection with their maintenance of order and guarding activities, also carry out those acts in defence of the realm otherwise incumbent upon the armed forces. Thus the personnel belong formally to the armed forces in war-time.

Besides units for the stationary guarding of certain objects to be protected units for the mobile guarding of larger areas and for the temporary supplementing of stationary guarding are also organized within the civil defence constabulary and guard service. Guarding measures are also incumbent upon authorities and enterprises carrying on activities at the objects of protection. When plant protection is organized the guarding activities of the authority or enterprise in question are included herein.

1400 Plant-Protecting Units a Good Reinforcement

The industrial protection supplements the general civil defence and is intended to meet the requirements of civil defence at certain plants and buildings.

The main rule is that plant protection shall be organized for enterprises having at least 100 employees and situated in a municipality or district in which the obligation to build private shelters exists. Further, joint industral protection must be arranged for neighbouring enterprises having together at least 100 employees. This applies chiefly in factory areas.

Interior from one of the four largest rock-solid garages in Stockholm. The garage can in war-time give protection to 15,000 persons.

An important exception from the main rule is that plant protection must also be arranged for certain enterprises situated in central town areas where only rock-solid shelters are built. This is chiefly a matter for enterprises whose activities are of particular importance for the Government, for national depots or for sick care during states of emergency and in wartime.

Plant protection is organized with command service, rescue service, fire-fighting service, casualty and ambulance service. ABC service and constabulary and guard service. The plant protection is in each case directed by a plant protection leader, assisted by one or more plant-protection supervisors. The owner or proprietor of the establishment for which the plant protection is organized defrays the costs for the organization.

The plant protection is as a whole estimated to include almost 1,400 units with in all between 60,000 and 70,000 persons. About 350 of the units are organized only for guarding duties.

The Organization Plan Indicates the Extent of Municipal and Individual Obligations

The local civil defence in each civil defence area is indicated in a special organization plan. From this emerge the scope and nature of the organization, amongst other things the number of service branches and their size and composition, where different kinds of evacuation and billeting are to be planned, where private shelters are to be built, where the public shelters are located and where plant protection is to be organized.

The plan must also make clear what civil defence measures are incumbent upon municipalities and individuals. The plan thus has economic implications for the latter. This fact has been taken into consideration in the drawing up of the plan.

The provincial government first makes a proposal for a plan and then consults the Civil Defence Administration. The proposal is then forwarded to the municipal representatives for their report. Also, individuals may be given an opportunity of expressing an opinion if they are affected by the lines of the proposal in a particularly high degree. The plan is then drawn up by the provincial government and becomes valid except as to those parts which are to be given their final form by the Civil Defence Administration. These refer to the questions of where private shelters are to be built, the building operations to be undertaken by municipalities and the division into districts. Special plans for the activities of the local general civil defence, the mobilization plan and plans for plant protection are then drawn up on the basis of the oragnization plan. Such special plans are those for evacuation and billeting, for the grouping of units and forces and plans concerning motorized vehicles.

Proposals for plant protection plans are drawn up by the owners of enterprises. The actual plan, which must refer to the organization, equipment etc. is in its final form decided upon by the provincial government.

20 Mobile Columns for Emergency Aid

The regionally organized civil defence, a part of the general civil defence, consists of 20 mobile columns and a voluntary air corps.

The function of the mobile columns is to strengthen the local civil defence units where the situation is such that the local resources are in themselves not sufficient. They are first and foremost intended for rescue work. The mobile columns or a part thereof may also be assigned independently to a damaged area or to relieve exhausted units from the local civil defence.

Each column is to carry out its activity in a specially designated area. Within this area it is then grouped at such a distance from the town where it is the first place intended to operate, that it can go quickly into action. This distance is as a rule at the most 30 miles.

The columns are distributed among the following main cities and towns:

STOCKHOLM	5	MALMÖ-LUND	2
UPPSALA	1	HÄLSINGBORG	1
ESKILSTUNA	1	GÖTEBORG	3
NORRKÖPING	1	ÖREBRO	1
LINKÖPING	1	VÄSTERÅS	1
JÖNKÖPING-HUSKVARNA	1	GÄVLE-SANDVIKEN	1
		SUNDSVALL	1

The columns are set up, mobilized and organized by the provincial government in the province in whose principal town the column in question is located.

A mobile column may be transported in its entirety by motorized transport units, in all about 100. It is completely self-supporting inasmuch as it includes units for, inter alia, feeding, fuel supplies and repair service.

The personnel of a column, which amounts to about 450 men, consists of conscripts who at the age of about 35 years are transferred to civil defence from the armed forces.

Every column consists of a column commander with staff, two rescue companies, a fire-fighting platoon, a maintenance platoon, a police section and a column administration. The respective organs for command and maintenance are so dimensioned that the column can be divided up into two groups which can operate at different places.

A rescue company consists of the company staff and three rescue platoons. The theoretical capacity of a company is to be able to rescue in 12 hours the human beings who, in a modern residential area, have been shut up in 30 normal shelters. A rescue platoon comprises four rescue groups and one heavy rescue group with compressors, rock-drilling machines etc.

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A fire-fighting platoon consists of six fire-fighting groups and a special service section. The total capacity is 12,500 liters of water per minute.

A maintenance platoon consists of two kitchen groups, repair group and equipment and transport group. The platoon may be divided up into two parts.

A police section for the maintenance of order, which comprises two groups, is intended i.a. for the protection of the column. The personnel is therefore armed.

The column administration consists of intendant etc.

Voluntary Air Corps

In collaboration with the civil defence and the Swedish Aero-Club, which is an association of the country's aeronaut clubs, a Voluntary Air Corps is organized. The activities are centrally directed by a corps command which is included in the Civil Defence Administration in states of emergency and in war time. In each province the command is exercised for the provincial government by a Provincial Air Commander. The latter's function is to plan and prepare the setting up of one or more flying groups. These consist as a rule of six aeroplanes together with two planes in reserve and, under a group commander, 22 pilots with special training.

The corps in full strength consists of 28 flying groups and a personnel of about 620 persons. Three flying groups are intended for Stockholm city and province, two each or the provinces of Göteborg and Bohus and the province of Malmöhus and one each for the remaining Swedish provinces. As example of the tasks which may be carried out by the air corps may be mentioned reconnoitring, supervision of traffic, fire-watching, indication of radioactivity, transport service and communications service.

3.2 Million Persons in the Evacuation Plans

The most important preventive measure is evacuation. In contradistinction to most other European countries, Sweden has good possibilities of scattering the population, thanks to the well-developed communications, sparse settlement, and relatively good billeting opportunities.

The evacuation plans give freedom of action

. For a situation which gives a certain respite, evacuation in stages is planned, so-called successive evacuation. This form of evacuation consists of emergency evacuation—in certain cases followed by relocation—and final evacuation.

Emergency evacuation is a measure that is intended for an emergency situation, and it implies the removal of a certain part of the population, maximally all non-working persons and the nursing help required for the old and sick. As a complement to the emergency evacuation is planned also, for the biggest towns, a removal of the working population living in the central parts to the less threatened outskirts which have as a rule adequate private shelters available. This moving of the working inhabitants also serves to facilitate a later final evacuation.

Final evacuation implies that at a later stage, when the danger of war has become imminent, the remainder of the population is evacuated, with the exception only of those persons who must stay behind to carry on activities indispensable for total defence.

For the situation that the risk of war and the need for evacuation comes more or less without warning, so-called blitz evacuation is planned. This form of evacuation implies that those evacuation measures planned for the town or district that have not yet been carried out are executed simultaneously and with the greatest despatch.

On. the strength of proposals by the Civil Defence Administration, the Government decides for which towns and districts evacuation is to be planned. For this purpose a list of such places is drawn up. This list is then successively revised. It includes for the most part centres with more than 10,000 inhabitants and certain other probable targets, e.g. railway junctions and towns with aerodromes. It is in all a matter of about 100 towns and districts.

On the basis of this list the Government then decides the extent of the evacuation to be planned. The current regulations imply on the whole the following. Emergency evacuation is planned for all the listed towns and districts. In addition to this, final evacuation is planned for centres with more than 30,000 inhabitants as well as for some smaller towns. *Blitz evacuation* is to be planned for centres for which final evacuation is planned.

Emergency evacuation affects altogether 1.7 million persons, and the final evacuation almost a million.

The *successive evacuation* is regarded as the normal method. In so far as the situation permits this, it is the method that will be applied. Blitz evacuation is an emergency solution that will, if possible, be avoided, but which must be prepared for. The planning of evacuation for a centre implies that the practical possibilities are created for an evacuation of the population at a point of time chosen by the authorities from case to case.

The above-mentioned planning of evacuation measures refers of course chiefly to the risk of air attacks. Certain coastal and frontier regions, however, may be considered to be particularly exposed to the risk of invasion. Thus for such regions so-called invasion evacuation is planned. The regions in question are indicated by the commander-in-chief of the armed forces, and the planning covers in the main the whole of the civilian population. At present, about half a million persons are affected by these evacuation plans.

The decision to evacuate is taken by the Government or by the authority designated by the Government, which may be e.g. the Civil Defence Administration, a civil defence coordinator or a provincial government.

A decision to evacuate may imply not only compulsory evacuation, but also a recommendation to the inhabitants to evacuate on a voluntary basis. Such evacuation may take place in connection with compulsory evacuation or independently of this, and be either a matter entirely for individual initiative or in collaboration with the civil defence.

A further form of compulsory evacuation, which cannot, however, be planned in advance in the same way as evacuation under the threat of air attack or invasion, is the evacuation which may prove necessary in case of fall out. Such evacuation may prove necessary practically anywhere in the country.

Billeting may treble the local population

The main rule for the planning of billeting is that all more densely populated centres and rural districts for which evacuation is not planned should constitute billeting areas. There are two exceptions to this rule.

Centres for which evacuation is not planned may not be used for the billeting of evacuees if a certain risk of attack is considered to exist. In such places—as a rule towns with more than 5,000 inhabitants—private shelters are built. The second exception refers to towns and distrists in which no billeting is desired for military reasons.

The planning of billeting implies that an inventory is made of the housing accommodation in the billeting centres, so that an idea of the billeting capacity is obtained. Other factors in this connection are also investigated, e.g. water supply, sanitary conditions and the possibilities of protection against radioactivity.

In general the planners reckon with a billeting capacity corresponding to at most three times the peacetime population. In certain areas, however, the limit is for military reasons set at maximally a doubling of the population. For both cases the further restriction holds that no billeting centre may be inflated to a population of more than 5,000 through the billeting.

The evacuees are as far as possible to be billeted in their own province and as near their home town as possible. The possibilities of billeting in districts near to the home towns must accordingly be utilized to the full. Persons who are to continue working in their home town after evacuation must, as far as is practicable, be accommodated in places that will facilitate their journey to work.

Billeting municipalities are divided up into districts of such size that each district can accommodate about 600 persons.

The civil defence controller directs evacuation and billeting operations

The civil defence controller directs the evacuation in his area. He establishes the requisite organization, issues proclamations concerning evacuation, sees to requisite means of transport and is responsible for the regulation of traffic. In this connection he utilizes the units of the local general civil defence.

In a corresponding way the civil defence controller directs billeting operations in areas in which billeting is to take place. He sets up the organization planned for the reception of the evacuees, issues notices concerning billeting, requisitions the necessary accommodation, gives orders for the establishing of hostels, and orders and has charge of the requisite means of transport.

The provincial government draws up plans

The planning of evacuation and billeting is done by the provincial governments in accordance with instructions from the Civil Defence Administration.

The basis: the power of initiative of the individual

The initiative and independent action of the individual citizen and his will and capacity to do things for himself and to help others are the fundamental prerequisites for a successful evacuation. It is in the first place the business of the individual to arrange for his upkeep, transport and billeting etc. The planning thus proceeds on the accumption that all who have their own motorized vehicles will use these.

The activities of the authorities as regards evacuation and billeting aim at supporting and coordinating, as far as possible, the independent action of individuals and taking care of those who cannot make arrangements for themselves. In case of evacuation, families are to keep together as far as possible. School children evacuate with their relatives. In order that the public shall be able to meet these requirements it must be informed of the plans for evacuation and billeting in peace-time. This information is given in different ways.

A general knowledge of the plans is disseminated through the press, radio, TV and the cinema. Instructions for the measures to be adopted by the individual are given in the brochure "If War Comes", which was distributed in a third issue to all Swedish households in October 1961—the first and second issues having been distributed in 1944 and 1951. In the evacuation centres the public receives more detailed information concerning those parts of the evacuation plans affecting the individual through notices posted in the apartment houses. Further information is given in the course in personal protection included in the voluntary training in self-protection. And finally, the public receives practical instruction concerning evacuation in the evacuation drill arranged by the authorities.

The Shelters Become Dwellings After Evacuation

Shelters must in principle fill two functions, viz., as emergency protection in case of attack before emergency evacuation and as dwellings for longer or

shorter periods for those left behind after emergency evacuation.

With reference to the use to which they are to be put, shelters are divided into public and private shelters. As regards the design, a distinction is made between rock-solid shelters and standard shelters. Protection is to be afforded in the first place by private shelters designed as standard shelters.

Private shelters in centres with over 5,000 inhabitants

The obligation to arrange, equip and maintain private shelters applies to certain buildings and plants in particular centres and districts indicated by the government, as a rule centres with more than 5,000 inhabitants. Apart from this, private shelters must be built in so-called risk-areas outside the built-up parts of the biggest towns, as a rule towns with over 50,000 inhabitants.

The obligation to provide shelters applies, as a rule, to apartment houses, office blocks and business buildings of three or four storeys—but not to one and two storey family houses—and to industrial plants where as a rule at least 25 persons are employed at one time. The obligation also holds for, inter alia, certain establishments vital for communications, for schools, hospitals and hotels with accommodation for at least 25 persons. In certain cases common or joint shelters may be arranged for plants or buildings adjacent to one another.

The costs for arranging, equipping and maintaining private shelters are to be defrayed by the owner of the building.

Public shelters for 70,000 persons left behind in 14 towns

Standard shelters are not built in the central parts of the 14 largest towns and in two smaller towns. The reason for this is that in the central parts of these towns the nature of the building is such that there is considered to be a great risk of devastating destructon in case of attack with e.g. nuclear weapons. In such circumstances standard shelters would not affort reasonable protection. In these areas the protection must be supplied by public shelters.

The public shelters are to be used to afford protection for those who are left behind for vital tasks in the central parts after final evacuation. In case of attack before there has been time for final evacuation these shelters are intended for use for emergency protection. When the public shelters are used as protection for those left behind, it is estiblated that a floor space of 1.8 sq. yards (1.5m²) per person is required. In case of emergency the minimum floor-space is reckoned as 0.6 sq yards (0.5m²). It has been estimated that 70,000 persons must remain behind in the central urban parts in question.

At the turn of the year 1963/64 there were modern public shelters in about ten of the fourteen towns for in all about 100,000 sitting or 33,000 resident persons. However, a special enquiry has shown that a number of the shelters are not suitable as protection for those staying behind, owing to, inter alia, the location of the shelters. The committee of enquiry has therefore proposed the building of further population shelters with accommodation for 50,000. These shelters should be distributed among approximately 130 buildings situated adjacent to the places of work. The government authorities have in principle approved the proposal of the committee and the requisite building operations have been begun.

Shelters are likewise arranged for the civil defence command and units etc. It is the government that decides the details of where and in what number such shelters are to be provided.

It is incumbent upon the municipalities to provide and equip public command and unit shelters. Government grants are allowed towards the defraying of the costs for these to the amount of as a rule two-thirds of the building and purchase costs after deduction of the value for peace-time uses. It is also incumbent upon the municipalities to answer for the maintenance and care of the shelters.

Standard shelters afford emergency protection for 2,3 million persons

Standard shelters are nowadays built according to technical regulations as issued by the Civil Defence Board for application as from July 1st 1961.

The regulations imply that the shelters shall afford protection against the effects of conventional weapons with the exception of direct hits. The protection afforded against blast-waves from nuclear weapons implies that the shelters resist at least an overpressure of half an atmosphere (0.5 atmospheric gauge), though the requirement is increased to 1 atmospheric gauge in the case of about 30 centres specially designated by the Government, where the risks of attack are considered to be greater than for other centres. That a shelter resists 0.5 atmospheric gauge implies that it resists e.g. blast-waves from the explosion of a nuclear charge of 100 kilotons if the shelter is at a distance of at least 2 km from zero point. At the same distance a shelter resisting 1 atmospheric gauge will protect against a nuclear charge of one megaton.

Standard shelters, finally, afford protection against heat radiation, radioactive radiation and all known gases used in warfare. The standard shelters must have a reserve exit, arrangements for ventilation and air-purification, heating and lighting, and, as a rule, outlets for water and sewage. They must also be provided with certain fixtures and equipment, e.g. dry closets, vessels for water, first-aid and fire-extinguishing materials and tools for forcible emergency exit.

The regulations regarding the size of the shelters imply that they shall have a floor-surface corresponding as a rule to 1 sq. yard (0.75m²) per person for those who in peace-time are expected to be living or working in the building. Where the shelters are after evacuation to be used as dwellings it may be estimated that every person will have at his disposal about 1.8 sq. yards (1.5 m²), minimum 1.2 sq. yards (1 m²) of floor-space. This is considered sufficient for a relatively tolerable existence.

The annual augmentation of standard shelter accommodation is estimated as about 200,000 places with 1 sq. yard (0.75 m²) per person.

In certain circumstances breaks in the basement walls between adjacent buildings are provided for.

Rock-solid shelters—exclusive protection

Rock-solid shelters afford protection against the effects of every kind of offensive weapon that may be expected to be used in massive air attacks. They also afford protection against the effect of nuclear weapons, except for points in or nearest to the centre of explosion.

Shelters in the rock are generally built with a rock ceiling of at least 15 meters. The actual shelter consists of a concrete structure standing independently in the surrounding rock.

The entrances are so designed that the blast-wave effects from explosive and mine bombs are damped. Doors and gates are so constructed that they can resist blast-waves from nuclear weapons up to an overpressure of at least 10 atmospheres. Ventilation ducts and similar outlets are provided with automatically quick-closing valves, so-called stone-filters and filters against radioactive dust. The safety doors, which are of concrete construction, may be closed manually or mechanically. Air purification is effected with the help of conventional smoke and coal screens.

The rest of the technical equipment consists of devices for ventilation, water supply, heating, drainage, cooling, dehydration and reserve electric power. The drainage system is provided with a pumping plant for the effective removal of used water and the emptying of the closets. The cooling is effected with the help of special refrigerating machines. It is estimated that it must be possible to remove at least half of the heat

In a rock-solid workshop in southern Sweden an artistic mechanic has decorated the rock wall with a landscape in order to keep the contact with the outer world.

produced in a crowded population shelter. Indicators for carbon monoxide, noxious gases used in warfare, and radioactive radiation are built into the ventilation devices. If the shelter is hermetically closed, the circulating air is mixed with oxygen, stored in the shelter already in peace-time.

Rock-solid shelters in the form of concrete constructions—built in exceptional cases where there is no suitable rock formation—are designed either as detached shelters or in the underground parts of especially resistant buildings. The safety devices are the same as in the rock shelters.

The investments are put to practical use

The amounts invested in shelters are of considerable magnitude. As an instance it may be mentioned that the sitting accommodation for each person in a standard shelter for 150 persons costs 160 Sw. crowns if it is constructed to resist an overpressure of half an atmosphere. Where the construction is designated to resist one atmosphere the cost rises to 198 Sw. crowns. The corresponding costs (seating accommodation) for a public shelter rises to 2,500 Sw. crowns. In the amounts mentioned, which refer to the costs index for the year 1963, are included all costs for the construction as well as for fixtures and equipment.

It is of course a desideratum that the shelters should be used in peace-time for suitable purposes. The Civil Defence Administration has issued special regulations concerning the peace-time uses. These imply in the main the following.

Private shelters should to the greatest possible extent be utilized in peace-time. It is not, however, permitted to make other installations than those prescribed for the shelter. It must be possible to make it completely ready for emergency use within 24 hours. Certain changes in the construction of the shelter may be undertaken with the consent of the provincial government.

Command centres may be used for peace-time purposes only to a limited extent. This is connected with emergency and safety considerations.

The case is different with the public shelters. With regard to these it has been stipulated that they shall be

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ALASKA EARTHQUAKE CONCLUSIONS

The following Excerpt is taken from a Preliminary Report on the Alaskan Earthquake, Friday, March 27, 1964, which was contained in an OCD booklet produced by the Office of Civil Defense entitled THE ALASKAN EARTHQUAKE. *The following are the conclusions arrived at in the report.*

SOME basic conclusions reached as a result of emergency civil defense operations in the great Alaska earthquake disaster, were stated by Alaska State Civil Defense Director Don Lowell, in one of the first moments he had for reflection. Lowell had this to say:

Guidance provided by the Office of Civil Defense, at the Federal level, has been proven generally sound.

To be prepared for disaster—

1. There must be an emergency plan.
   This must be a flexible plan—one designed to meet various contingencies, either in peacetime or in war.
2. There must be trained people—who know what their responsibilities are, and where to go and what to do when disaster strikes.
3. There must be supplies and equipment in place—and ready for use in emergency.
4. There must be communications—based primarily upon shortwave radio, and with a great number of battery-powered transistor receivers in the hands of officials and the public. Emergency generators at transmitter sites and at central receiving sites are also essential.
5. There must be a central control point for each operational area, for the gathering and dissemination of accurate, official information. And there must be trained, professional people at those control points, to analyze incoming information, and prepare emergency information messages.
6. There must be an adequate operations headquarters for civil defense, with heat, power, and lights—and space for the operational personnel, and along with this, must be control of access for those people who work in the headquarters, and to keep out those who are not involved in the emergency operations.
7. Overall control must be by civil government—with military support.

A Nation that can conduct successful peacetime disaster operations is also prepared to deal with the effects of any attack.

Alaska has provided an invaluable exercise for successful disaster operations in all States and communities throughout the United States. ●

ALBERTA PROVINCIAL EMERGENCY HEALTH SERVICES DIVISION PREPARES FOR VARIETIES OF DISASTER

THE TASK of preparing the medical resources of Alberta to meet local or national disaster has been given to the Emergency Health Services Division of the Department of Public Health. To carry out this task, a staff consisting of a director, a supplies officer, and two nurse consultants have been appointed, and the work has been divided into two main channels: Local Disaster Planning, and National Disaster Planning.

Each active treatment hospital in the province has been contacted under Local Disaster Planning. Advice and assistance in the preparation of a plan, by the hospital, to meet with any emergency that may arise in the area in which the hospital provides services, has been given. Discussions and lectures are held with hospital officials and staff to emphasize the need for planning and to outline the methods of planning.

In many cases the initiation of the hospital plan has been the spur to activate the other agencies in a municipality, resulting in the establishment of a municipal survival plan.

National Disaster Planning is based on the assumption that, in the event of an atomic war, medical care will be a prime requirement. Generally speaking the Provincial Emergency Health Services Plan, designed to provide this care, provides for the establishment of a chain of Emergency Medical Installations around each target area where casualties will be treated and eventually taken to existing hospitals for further care.

These installations will be staffed by the hospitals, or by medical personnel residing in the area, as circumstances permit. They will be equipped with supplies previously released from the Federal Emergency Health Services to the Provincial Emergency Health Services under the Federal-Provincial Agreement.

Alberta's Emergency Health Services have received Hospital Disaster Kits, and these have been distributed to each hospital that has developed its disaster plan, on the basis of one to each 25 beds in the hospital. The kits contain two litters, burn and shell dressings, and a quantity of intravenous solutions with the giving sets.

Also received in Alberta has been one Advanced Treatment Centre, which is being used as a training unit. As soon as suitable accommodation is acquired, twenty-three more will be delivered to the province. Three of these will be mobile Advanced Treatment Centres, which will be located at Edmonton, Calgary, and Grande Prairie, to be used in the event of local disasters. Twenty Advanced Treatment Centres will be pre-positioned throughout the province in readiness for use in case of a national disaster. The Advanced Treatment Centre consists of a complete selection of drugs, dressings, surgical equipment and other supplies and equipment sufficient to care for 500 persons. The materials are conveniently packaged so that the Centre can be set up in the shortest possible time, and will be located on the outskirts of target areas for the reception and treatment of casualties.

In addition to setting up disaster plans and acquiring the necessary equipment and supplies, the Emergency Health Services have held lectures, courses, and discussions with doctors, pharmacists, nurses, nursing aides, and other medical personnel, and this instructional program is continuing.

Increased stress on Municipal Disaster Planning, stepped-up training of personnel, and issuance of literature are projected for the coming year, and it is hoped that final details of the Provincial Survival Plan will be completed at an early date. ●

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planned and executed to permit of satisfactory use in peace-time—as garages, workshops for indoor sports and theatrical, study and hobby activities. The provincial governments may give permission for changed peace-time use and for certain changes in construction and equipment. The shelters must be completely ready to function within forty-eight hours.

Protection for water, gas and electricity supply

It is an important civil defence objective that the supplies of water, gas and electricity should as far as possible be maintained in war-time. As regards the supply of electric power the War Precautions Board supports this by issuing prescriptions for protective devices. Every year many millions of Sw. crowns are invested for the providing of protection for power plants of different kinds, such as electric power stations, transformer stations and dam constructions.

There are also regulations according to which it may be made incumbent upon the municipalities to make certain reserve arrangements for their technical plants. Furthermore, the municipalities are recommended to place new municipal plants or vital parts thereof into rock shelters.

EDITOR'S NOTE: *The second half of this article will be published in the December issue of the* DIGEST.

PERSONAL SERVICES

Prepared by Emergency Welfare Services Division Department of National Health and Welfare

"Preparation can lead to prevention of needless human and material losses".

THIS CONCEPT is of course in the background of all emergency planning.

In the case of Emergency Welfare Services, planning is based on the best available information, techniques and procedures learned from experiences in natural disasters and in time of war.

In peacetime, government and private welfare agencies exist to help individuals and families in meeting the crises of everyday living. In time of disaster because of the increased need for welfare services, not only the scale and complexity of the services, but the size and shape of the welfare organization must be altered. The Emergency Welfare Services with its breakdown into tasks of a common denominator—Emergency Clothing, Emergency Feeding, Emergency Lodging, Registration and Inquiry, and Personal Services—affords a practical structure for administration and the most economical use of personnel. The first four named are organized to provide assistance to large groups, and are known as mass care services. They have been designed to meet the basic requirements for survival. However, experience has shown that in an actual disaster there are personal and social needs essential to the survival and well-being of many victims, which cannot be dealt with on a mass care basis.

To quote from Richard M. Titmuss' book "Problems of Social Policy" in which he analyzed the war experiences of Great Britain, "It was found by hard experience to be an essential condition and not just an administrative refinement or a sentimental frill, for those services to be informed with a new spirit. The social distresses of each individual had to be regarded as unique". Accordingly, Personal Services has been developed to meet the needs of special groups of people by providing them with care, guidance and material assistance beyond that which is available through the four mass care emergency welfare services. Because of the nature of the various tasks to be performed, four operational Bureaux are necessary: Reception, Unattached Children and Dependent Adults, Institutional Care, and Counselling and Emergency Aid.

The following description of the special needs and the function of each Bureau is based on the understanding of human behaviour and the experience of welfare agencies.

Reception Bureau

People uprooted are people in crisis. People who leave their homes and familiar routines, in the face of actual or threatened disaster, suffer not only from material deprivation but from mental and emotional stress. Relatives may be injured or killed or their whereabouts unknown. Evacuees arriving in a reception community could be stunned, distraught, grief-stricken individuals. Individual attention would be needed to deal with their fears and anxiety and to restore a sense of direction.

The function of the Reception Bureau is to arrange for the initial reception of disaster victim arriving in reception communities. Reception workers will answer their questions, talk to them briefly to determine their most urgent needs and direct them to the appropriate services. Also, reception personnel must be on the lookout for people who do not request but obviously need explicit direction. The fact that assistance is organized and that everything possible is being done to bring and keep families together will in itself help to reassure evacuees.

Unattached Children and Dependent Adults Bureau

Any child abruptly separated from home and family is likely to feel lost and frightened. In disaster conditions, the problems of children are many. Some may simply be too young to look after themselves. Others may be too bewildered to identify themselves to strangers. Adolescent or pre-adolescent youngsters may behave in a manner annoying or upsetting to adult evacuees, thus complicating the problem. It has been estimated that the proportion or unattached children within any large group of evacuees arriving at Welfare Centres would be one percent. If school children were evacuated as classroom groups or if there were no warning before an attack, a higher percentage would arrive in some reception communities requiring individualized attention and care.

Some adults, because of age or physical or mental handicaps, cannot care for themselves when separated from their families. They are worried, often irritable

and they may need sanitary facilities more often than other evacuees. They would need rest facilities and special care and attention. For purpose of planning, it has been estimated that within a large group of evacuees, one percent would be dependent adults. As the number of aged persons within our population increases, the figure for planning should be revised proportionately.

The function of the Unattached Children and Dependent Adults Bureau is to arrange accommodation and temporary care for unattached children and dependent adults, first in congregate facilities and later, if required, in foster care or in other institutions.

Institutional Care Bureau

In Canada, at least one percent of our population lives in Welfare Institutions. Residents of a welfare institution relinquish much of the management of their lives to the institution's staff. They become accustomed to group living. If these people, children or adults, are to live satisfactorily as a group, they need assurance that an institution will continue to care for and maintain them. Evacuation of welfare institutions will remove the residents from their familiar surroundings, disrupt their routine and increase their dependence. More than ever they would require reassurance. They would need to know what was in store for them and what was being done to ensure their survival and well-being.

The function of the Institutional Care Bureau is to arrange for care of persons from evacuated welfare institutions. Children or adults would be kept together in a supervised group and accommodated in an established institution or improvised facility according to the predetermined provincial plan.

Counselling and Emergency Aid Bureau

Once the initial shock of disaster has passed and after imperative basic needs have been met, families and induividuals would seek help with personal problems caused by the disaster. Many people who had never sought advice and assistance in the past would do so under emergency conditions. There would be problems needing individual attention to maintain morale. Advice and assistance would be needed to help with the personal and social problems created or aggravated by the emergency.

Furthermore, though individuals and families need mass care services, they also want to resume independent and useful living as soon as possible. To do this, they would need material help and likely the means—either money, vouchers, or requisitions—to secure the basic necessities of life. Not only evacuees, but also the residents of reception communities might have special needs if normal income were to cease and require the services of this Bureau. Only as the principle of continuity and extension of existing welfare programs is applied can such help be available and successfully administered. Past wartime and peacetime disasters have shown us how important it is to rehabilitate and restore individual independence as soon as possible.

The function of the Counselling and Emergency Aid Bureau is to provide counselling services and financial aid to help individuals and families re-establish themselves. Counselling in an emergency is, essentially, limited. In many instances it may consist only of helping people to "make the best" of the circumstances in which they find themselves. As conditions become more stable and as the work changes from that of sustaining life to achieving a return to normal living and individual rehabilitation, workers can take more time to evaluate and assist in the rehabilitation plans of individuals or families.'

This description of the role and responsibility that Personal Services is organized to carry within Emergency Welfare Services may sound speculative to some readers. The EMO NATIONAL DIGEST—February, 1963, referred to the accounts of Hurricane Carla as a valuable reference for disaster planning. Accounts of the reception and rehabilitation of the coastal residents of Texas and Louisiana who were evacuated are given in the reports of welfare activities. At the height of the operation over 200,000 persons were being assisted by oragnized welfare services. Compared to the hundreds of thousands who would be disaster victims in the event of a nuclear attack on Canada, this is not a large number. But the techniques and procedures employed have significance for Personal Services. The welfare officials reported that the Public Assistance staff in Texas put their emergency welfare planning to good use. The provision of Emergency Welfare Services was concentrated in suitable buildings and supported the attempts to be orderly in reception and prompt in meeting human needs. Even the air of efficiency, when some bottlenecks in service occurred, proved reassuring to the people waiting. This centralization of services in a welfare centre proved its worth as people needing help did not have to be referred from one place to another, thus adding to their frustration and upset.

It should be evident that this emergency welfare service cannot base its planning solely on the civilized desire to prevent or minimize human suffering. It must also utilize scientific principles that can be applied to the understanding, prediction and control of human behaviour. Only as Personal Services uses these principles in its projected operations, will it be prepared to meet the special needs of people during an emergency and to help re-establish them within our society. ●

STATEMENT ON DEFENCE, 1964

Civil Defence in the U.K.

from: Industrial Civil Defence Review

UNTIL general disarmament has been achieved the possibility that nuclear weapons might be used against this country can never be totally excluded. The Government believe this possibility to be remote, but it cannot be ignored. In face of it, the Government has a clear duty to make preparations to mitigate the consequences of nuclear attack for those who would survive. Within the framework of our defence policy, therefore, civil defence preparations have an essential part to play. These preparations involve almost every aspect of national life and embrace all measures necessary to the survival of the community following nuclear attack.

What could civil defence achieve? The Government has never sought to conceal that a nuclear attack would cause millions of casualties and unimaginable destruction. No one can assess exactly how great the toll would be: many factors would play their part; but, terrible though the disaster would be, it would be likely that millions would survive. Those survivors would stand in urgent need of the assistance which a civil defence organisation, planned and prepared in advance, could provide. This is the underlying principle of all civil defence preparations. They are not based on any attempt to minimise the effects of nuclear weapons. Civil Defence could do little to help those within the areas, of complete devastation; but, outside those areas, it could reduce the suffering of large numbers of men, women and children, and help them to survive. Civil Defence is not and never can be a comprehensive insurance against nuclear attack. How effective it would be depends on the premium which we can afford, having regard to other commitments and to our assessment of the likelihood of the disaster. But so long as nuclear attack remains a possibility, it is no more than prudent and humanitarian to take out such insurance as we can against its effects.

Within the limits of our resources, civil defence preparations must be broadly based and realistically planned. The lines on which work should proceed if these objectives are to be attained were laid down in the revised programme of home defence expenditure announced in the report on defence for 1961. In addition to improving the efficiency of the voluntary civil defence and emergency fire services, particular attention has been given within this programme to two main objectives of the Government's plans. These are, first, the preparation of an emergency system of control which could provide a framework of administration following a nuclear attack, and secondly, arrangements for the maintenance and restoration of supplies and services essential to the survival of the nation.

For the emergency system of control, wartime regional seats of Government have been provided and equipped in England and Wales, and similar centres in Scotland. Work on improving those controls is going ahead. From the regional seats of government the emergency chain of control extends to local authorities. As explained in the report on defence for 1962, discussions have been held with local authorities about the arrangements for control within the regions. In the light of these discussions, changes are being made in the system of control below regional level, which will henceforth be based entirely on local authority areas. These changes would enable the government and administrative resources of the country to be used more effectively throughout the period when the nation might be struggling to survive.

Closely linked with the emergency system of control are emergency organisations for essential supplies and services. The aim here is to achieve flexibility in our control arrangements so as to make the best use of surviving resources, and to concentrate expenditure on items of particular importance. Thus, in addition to the organisational plans which have been made, reserves of food, medical supplies and oil have been stockpiled and special measures taken for the continued operation of other essential services such as emergency ports and anchorages and for the safe guarding of water supplies. Substantial sums have also been extended on providing emergency communications and on the maintenance of broadcasting in war.

In our civil defence preparations, the police, fire and hospital services and the Civil Defence Corps and Industrial Civil Defence Units have an essential part to play. Their organisation, training and equipment is an important part of our peacetime preparations. Our plans rely also on the close support and co-operation of units of the Armed Forces, and in 1964 new arrangements will be made to train units of the Territorial Army in emergency fire-fighting techniques. The provision of Royal Observer Corps posts and headquarters required for the warning and monitoring organisation is nearing completion. The installation of equipment for the more rapid transmission of warnings should be substantially completed in 1964.

The Government has also reviewed the problem of providing shelter against radioactive fallout. Advice on improvisation of such shelter is contained in Civil Defence Handbook No. 10. In addition, some communal shelter would be necessary for those living in certain types of dwelling with a low protective factor

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PROTECTION OF POPULATION IS MAIN TASK OF CIVIL DEFENCE

by

Marshal of the Soviet Union V. Chuykov, Commander-in-Chief of Ground Troops.

EDITOR'S NOTE: *The full text of Marshall Chuykov's article appeared in Voyennyye znaniya (Military Knowledge), Moscow, No. 1, January 1964, pp. 3-4. Excerpts of the article are presented here.*

"In raising the defense efficiency of the Soviet state an exceptionally important role is taken by the strengthening and constant improvement of civil defense.

The revolution in military affairs brought about by rocket-nuclear armament and by the exceedingly rapid progress of science and technology, has presented to civil defence new and immeasurably greater demands. Civil defense has become an important factor in reliably securing the viability of the state. Under present circumstances not a single defence measure can be undertaken without paying heed to the demands of civil defense.

The main task of civil defence is the protection of the civilian population from nuclear weapons and other means of mass destruction. This is completely normal. Irrespective of the nature of war, the decisive role in it will be played by the masses of the people. In our socialist society the basic value is man. He is the creator of the bright future—Communism. For this reason all efforts of civil defence must be directed toward providing protection for the people.

With the development of rocket-nuclear weapons the problem of protection of the people changed radically. Now we cannot limit ourselves to the extension of defensive measures only to individual cities and the military objectives. It is necessary to exert the maximum care for the antinuclear defence of the population of the whole country, including the rural population.

The basic method of protecting the population under present conditions is its dispersal (evacuation) from large cities which are probable targets of the rocket-nuclear attack of the enemy. It is understood that the dispersal would play an effective role if it is precisely planned and material and technical means are provided for this purpose. The local authorities would determine for the evacuation who, where, and what kind of transport.

Civil defence is faced with the necessity to provide shelters for the people at the places of their work. For this purpose we will have to accumulate a considerable quantity of protective facilities. At every concern, at every agency, kolkhoz, and sovkhoz proper places for protection of the people can be found: special shelters, cellars of industrial buildings and residential housing, underground ditches, etc. Chiefs of civil defence, their staff members, leaders of organizations and agencies should all make in advance plans for the use of such shelters.

The effect of radioactive substances presents a tremendous danger after the nuclear explosion. To save one's life and health everyone must know how to make use of the protection provided by industrial, housing, and other buildings; he must have individual means of protecting his respiratory organs and exposed parts of the body; he must know and adhere to proper rules of living and work at an area contaminated with radioactive fallout along the route of the nuclear explosion cloud. Our task is to explain to the great masses of the people what can be used as a means of protection in such cases. We must not only explain but also teach civilians how to make individual and collective means of protection.

Our whole ideological arsenal—propaganda by means of lectures, press, radio, television, movies, museums, exhibitions, libraries—must play an important role in military, patriotic indoctrination and in the popularization of civil defence knowledge. New tasks have been given to the magazine "Voyennyye znaniya" (Military Knowledge)." •

Continued from page 16

against fallout, such as prefabricated houses and caravans. A detailed survey is required to determine the extent of this need, to identify suitable existing accommodation, and to determine what each shelter would require in the way of adaptation and provisioning. Before considering a wider survey, the Government intend first to carry out a pilot survey in selected areas of the country to find out the best methods of collecting and analysing the necessary data. Plans have been made for the holding of this pilot survey during 1964.

In 1964 work will be carried forward on the lines set out above. For this purpose $24.1 m. has been provided in the coming financial year. In a constantly changing situation, the task of civil defence can never be regarded as complete and plans must be kept continually under review. Our general objective must be to complete physical preparations as our resources allow and to maintain and improve the state of readiness which has already been achieved. In this the Government will continue to rely on the co-operation and assistance of all those who would have an essential contribution to make to the survival of the nation. •

NEWFOUNDLAND EMO PLANS TO SUPPORT FOREST FIRE OPERATIONS

by D. M. OWEN, *Director of Emergency Planning*

Background

The pine and fir forests that cover more than half the land area of Newfoundland provide the raw material for the huge pulp and paper industry on which thousands in the Province depend for a living. The protection of this valuable natural resource is the primary concern of the Forest Service, a branch of the Department of Mines, Agriculture and Resources.

Forest and brush fire from natural causes and human carelessness are a threat from approximately May to November each year. Much of these woodlands are inaccessible by road and until the advent of the water bomber, fires could burn in some areas for days before any effective control measures could be brought to bear. Even now, with air reconnaissance and four water bombers on the alert, it is still possible for fires to get out of control and become a threat to life and private property.

Some idea of the magnitude of the forest fire threat in the Province can be obtained from the statistics for the 1961 fires—the last major outbreak. In that one summer, fires swept over some 1,186,040 acres of the island of Newfoundland and Labrador destroying 481,820 acres of valuable woodland. The cost to the Provincial Government, not taking into account the forest resources destroyed, exceeded half a million dollars.

At the peak periods, several thousand men were fighting fires in the woods. On the instructions of the Forest Service, 8,760 persons were evacuated from 31 small communities by the RCMP and the Department of Public Welfare. Many others left their homes of their own accord to seek safety with relatives and friends. In all, 36 homes and 11 other buildings were destroyed and some of the evacuees were cared for by welfare services for up to a month before they could be returned to their homes or new homes found for them. Three larger communities, where special CNR trains stood by, were saved by the efforts of the firefighters and changes of the winds.

As the volunteer firefighters tired, a call went out to the Army and more than 1,000 troops were air-lifted to the fire area. Operating under the direction of the Forest Service, the troops went to the fire lines and relieved or assisted those who had been battling the fire for days.

The Honourable John T. Cheeseman, Minister-in-Charge of emergency measures for Newfoundland discusses the Forest Fire Support Plan with Mr. J. G. Channing, Deputy Minister of Provincial Affairs and Chairman, Newfoundland EMO.

In 1961, Emergency Services on the EMO pattern in the Province were not fully organized and Dr. Stuart S. Peters, Deputy Minister of Resources, and Mr. Ed Ralph, the Chief Forester, coordinated all of the emergency measures arising from the fires, including evacuation, directly with the Departments concerned. It is worth noting that under their direction, the operations were carried out without a single life being lost or serious injury being sustained.

In the Winter of 1963-64 a complete study of EMO's role in civil disasters was undertaken. It was obvious that the most likely civil emergency was the forest fire. From the 1961 operations it was also clear that the EMO Emergency Services was ideally suited for many of the tasks for which forces were improvised in that emergency. An approach was therefore made to the Department of Mines, Agriculture and Resources and that Department readily agreed to hand over responsibility for most

Major D. M. Owen, *Director of Emergency Planning.*

of the subsidiary tasks performed by it in 1961 provided EMO could ensure that the organization was available. The major advantages from the Department's point of view was that its specialist Forestry officers would thus be freed to direct firefighting activities and not be tied down with administration as they had been in the 1961 fires.

There were two possibilities with respect to legislative authority for emergency measures in a fire disaster. The two Acts, The Forest Fires Act (as amended) and The Emergency Measures Act, each provided the necessary authority for action but the former had one major advantage. The Forest Fires Act authorizes the Minister of Mines, Agriculture and Resources to declare a 'fire disaster area' whereas The Emergency Measures Act requires a declaration by the Lieutenant-Governor in Council to give effect to the emergency powers. The Forest Fire Support Plan was, therefore, based on the authority of The Forest Fires Act.

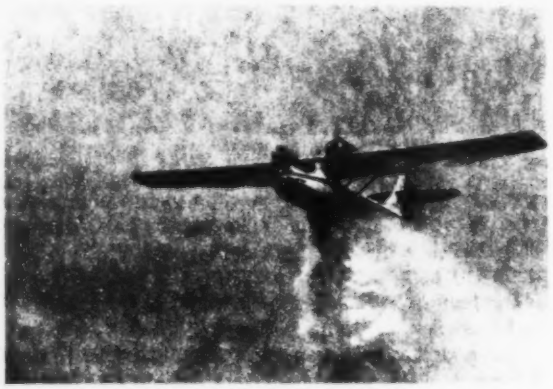
The Plan

The Forest Fire Support Plan was drawn up by the Director of Emergency Planning in close consultation with the Civil Defence Co-ordinator and the planning officers of the various Emergency Services concerned. The 'support' aspect is emphasized. Its purpose, simply, is to relieve the Forestry officer in charge of firefighting of all administrative details not directly connected with fighting the fire.

In brief, EMO has undertaken to establish, when requested by Forestry, a Support Headquarters within the Firefighting Headquarters which will be staffed by the Director of Emergency Planning or his designated alternate and appropriate representatives of the Emergency Health, Emergency Welfare, Police, Transportation, Public Information and Emergency Communications Services. A report centre will operate within Support Headquarters and situation maps will be maintained. Co-ordination will be effected by periodic staff conference as problems arise. The Emergency Service roles are very similar to their roles in a war situation.

EHS will maintain liaison with the Support Headquarters and provide health services on an 'as required' basis using the facilities of the Provincial Health Services.

Three Forest Rangers with "back tanks" dampen down the fringes of a fire while a SIKORSKY helicopter lays hose.



CANSO water bomber dumping its 800 gallon load over burning Newfoundland forest.

EWS will receive and care for all evacuees, control the evacuation of welfare institutions if required and, in addition, supplement the emergency feeding facilities of the Forest Service in the event of large numbers of volunteer firefighters being employed.

The RCMP will, in addition to normal police duties in a forest fire area, be responsible for control of evacuation and convoy of evacuees to welfare reception centres. RCMP communications, liaison aircraft and coastal patrol boats will be available if required.

No Road Transport Control Organization exists in Newfoundland at present. Hiring or requisitioning of transport will be undertaken directly by the EMO staff at Support Headquarters. Details of bus companies and trucking fleets are being assembled and listed for ready reference.

Public Information Services will be provided by the Canadian Broadcasting Corporation through the facilities of its outside broadcast service. Past experience emphasizes the need for up-to-date and factual information being always available. In their capacity as a Public Information Service, the CBC will issue periodic bulletins, warnings and assurances to the public and other news media representatives, based on information supplied by the Forest Service.

The Provincial Emergency Communications Service will augment the already extensive radio networks of the Forest Service and the RCMP, if required.

Studying the map from left to right: Mr. C. S. Knight, Provincial Director EWS; Mr. D. L. Butler, Provincial Director EHS and Dr. Stuart S. Peters, Deputy Minister of Resources. Major D. M. Owen, Director of Emergency Planning, at the left operates the radio in the Civil Defence control van.

The Plan only comes into operation at the request of the Forest Service but this in no way precludes requests for lesser forms of assistance during less critical fires.

Eventually, the Plan will be included in the Provincial "Plans for Survival in War or Civil Disaster" now in preparation. Pending approval as part of these overall plans, authority for its implementation is by Departmental agreement. The Plan has received the concurrence of Cabinet.

Conclusion

The Plan described above has deliberately been kept simple to ensure its flexibility. It depends for its effectiveness on organized and trained Emergency Services personnel and on careful co-ordination of their activities.

Newfoundland EMO feels that plans of this nature, if properly publicized, will go far toward breaking down the public apathy toward our work during the present 'thaw' in the Cold War. Provided we are careful to give each of the Services a role compatible with its wartime role, we need not alter our organization or training substantially. An alert EMO/CD responding to a call in a civil emergency will do more for public relations than thousands spent in advertising. ●

HOSPITAL DISASTER PLANNING EMPHASIZED IN MANITOBA

An August, 1964, circular letter of the Department of National Health and Welfare has paid tribute to the Manitoba Hospital Commission and its Chairman, Mr. G. L. Pickering, by quoting the text of a letter of instruction to Manitoba Hospitals earlier this year. The letter emphasizes a recommendation made by the Advisory Committee on Hospital Insurance and Diagnostic Services in October, 1963, that disaster planning by hospitals be accepted as a normal function of management and that hospitals be encouraged in the development and testing of their individual disaster plans.

Mr. Pickering's letter, dated April 30th, 1964, reads:

"In recent years, there has been a growing awareness in the hospital field of the need to prepare for disaster and emergency situations, to accept responsibility not only for the patients in hospital but also for the reception and treatment of casualties.

The Manitoba Hospital Commission, in co-operation with the Associated Hospitals of Manitoba and the Manitoba Emergency Measures Organization, is sponsoring a series of Hospital Disaster Institutes whereby every hospital in Manitoba will have had an opportunity by the end of 1964, of attending an institute on disaster planning. It is hoped that these institutes will be helpful to hospitals, particularly those hospitals which have not yet prepared disaster plans. The preparation of a disaster plan and the holding of regular exercises is essential if a hospital is to be in a position to cope successfully with emergency situations.

With the appointment of an Emergency Health Services Officer, a few years ago, hospitals were requested to prepare and submit disaster plans. By agreement between the Emergency Health Services Officer and the Manitoba Hospital Commission, all disaster plans are now to be submitted to the Commission for review and approval. If your Hospital is without a disaster plan, we would suggest that such a plan be prepared and forwarded to us at the earliest possible time.

Should you require assistance in the preparation of a plan for your hospital, we will be pleased to help in any way possible." ●

SPECIAL COMMITTEE ON DEFENCE REPORT

Presented in the House of Commons
1st October, 1964.

On 1st October, 1964, Hon. D. G. Hahn, Liberal Member of Parliament for Broadview, presented the Fourth Report of the said Committee. The Fourth Report, No. 160 of Votes and Proceedings of the House of Commons of Canada, reported on the Services, Civil Emergency Planning, Regular Officer Training Plan, Reserve Forces, Militia and the R.C.A.F. Auxiliary.

The following is the extract on Civil Emergency Planning from this report.

Chapter III—Civil Emergency Planning

30. The prime task of Civil Emergency Planning is to plan now so that appropriate action could be taken in the event of a nuclear attack or major civil disaster. This planning should ensure—

(*a*) the continuity of civilian government at all levels;

(*b*) the identification and allocation of resources remaining after an attack so that they may be effectively used for the survival of the population and the maintenance of any required military action; and

(*c*) that the civilian population is informed and able to make use of any existing protective facilities.

31. In the event of an emergency, it is vital that information on all aspects of the situation be quickly gathered. This information must be rapidly transmitted to those responsible for taking action. A fundamental task therefore of Civil Emergency Planning is to ensure the availability of an effective communication system across the country in the event of an emergency.

32. In an emergency civilian government at all levels would remain responsible for its respective functions. The Emergency Measures Organization (EMO) structure would provide communications, specialist knowledge, and a co-ordinating function, to act in a staff capacity to the various civilian governments. It is noted that EMO organizations are now in operation in all provinces, and that 2,100 out of a total of 4,000 municipalities (approximately 80% of the population) are covered. Efforts should be continued to provide coverage for the remainder of our municipalities.

33. The responsibilities and the authorities of the various levels of government would, of necessity, change with the nature of the emergency. The situation could vary from a local civil disaster to a major nuclear attack involving large portions of the country. It is important that the responsibilities and the authorities of each level of government be defined under these varying conditions. There is an indication that this allocation of responsibility is vaguely defined. There has not been a meeting of the Federal-Provincial Conference on Emergency Measures since December, 1962, and no meeting is currently scheduled. There has been no national exercise for a number of years. The Committee is concerned that this lack of continuing liaison and exercise with the provinces has seriously impaired the validity of the planning. Gaps in levels of responsibility have not been effectively resolved.

34. No attempt is being made to provide blast protection for the population. The short warning time would make evacuation of major population centres a dubious proposition. The cost of an adequate blast shelter programme is so high as to be unjustified. The Committee concurs that the resources that would be required for blast protection of the population are better employed in military defence where they can contribute to the deterrent to war.

It is possible that an effective and economic Anti-ICBM system might be developed. This would require a re-appraisal of the decision not to provide civilian blast protection. It is considered unlikely, however, that the economics either of the Anti-Missile system or of a blast shelter programme will make such programmes possible in the near future.

35. Nuclear fallout could be a major hazard to undamaged parts of the country after a nuclear attack. Provision is being made to detect, and to forecast, such fallout. Reasonable warning time would generally be available in the event of fallout.

Programmes involving mortgage loans, bank loans, and information, have been provided to induce home owners to provide their own fallout protection. These have been failures. Much of the publicity falls on deaf ears. Most of the pamphlets wind up in the waste basket. The public is generally disinterested in times of relative peace. These facts must be recognized.

36. A survey of public buildings is being carried out in Alberta to determine their suitability as fallout shelters. This is being conducted as a pilot study. No facts are available as to the cost of such a survey nor as to the cost of modifying existing buildings to meet shelter requirements. It is possible that the Alberta study will show that fallout protection can be provided at reasonable cost in existing public buildings.

37. The Federal Government has spent an average of 26.7 million dollars per annum on Civil Emergency Planning over the last six years. This has grown from a low of 4.1 million dollars in 1957-58 to a peak of nearly 70 million dollars in 1961-62. For the current fiscal year our expenditure is 19 million dollars. The United Kingdom will spend less per capita at 38.5 million dollars. The United States will spend more per capita at 358 million dollars.

Expenditures on the basic elements of a communication system, a warning system, a central planning function, field co-ordinating agencies, and limited fallout shelter research, would be relatively modest and are necessary to provide a basic security and survival capability. Vast additional expenditures could be made for blast and fallout shelters, massive public education programmes, and other useful activities. The Committee feels that in the scale of priorities, expenditures on Civil Emergency Planning should be limited to those funds required for the basic elements enumerated above.

38. There was a recent accidental triggering of the siren alarm system in Ottawa, Ontario. This false alarm brought out several weaknesses in EMO procedures and administration that must be rectified. A major weakness was that large numbers of people did not know that they should have turned on their radios for further information.

39. Your Committee therefore recommends:

(*a*) that a federal-provincial meeting on Emergency Planning be held before the year end. Future meetings should be held at least annually in order to ensure continuing liaison between the two levels of government. Joint planning must be developed, that recognizes clearly the responsibilities of the various governmental levels;

(*b*) that EMO national exercises be resumed and conducted on a regular basis;

(*c*) that expenditures of funds for the current home shelter programme be discontinued;

(*d*) that research be carried forward so that techniques of providing home protection quickly, with materials at hand, may be developed;

(*e*) that the study of public fallout shelters in Alberta be completed. An analysis should then be done, based on the data it reveals, as to the cost of providing public fallout shelters across the country and the percentage of population that may be so protected;

(*f*) that a decision be made concerning fallout protection. The public will not build shelters. It is financially impossible for the Federal Government to provide fallout shelters for the entire population. Therefore the government must decide, based on the costs revealed by the Alberta survey, whether or not it will provide protection for a portion of the population;

(*g*) that public information programmes be instituted to provide basic information. They should be on a periodic basis on television, radio and in the press; and

(*h*) that consideration be given to the regular testing of the alarm system in all communities across the country.

Statement on EMO Estimates, 1964-65

The following statement on estimates for the Emergency Measures Organization was presented to the House of Commons on Thursday, October 22, 1964, by Hon. C. M. Drury, Chairman of the Cabinet Committee on Emergency Plans.

DEPARTMENT OF DEFENCE PRODUCTION

Emergency measureas organization—
20. Administration and operation, $2,600,000.

MR. DRURY: Mr. Chairman, as minister responsible for the emergency measures organization I would recall to hon. members that evidence was given to the special parliamentary committee on defence both by myself and the staff of the emergency measures organization on July 18 and again on July 23 at which times the program of the emergency measures organization was outlined and an indication was given of the intentions with regard to emergency measures and also as to the priorities which would be observed in the implementation of this program.

The objectives of the civil emergency planning program remain the same as disclosed to the committee, namely to make preparations to help ensure maximum survival of the Canadian population and resources in a nuclear or conventional war, and to assist the provincial governments and through them the municipalities in coping not only with a war emergency but also with peacetime disasters whenever requested to do so and when the damage is beyond the capabilities of these local governments. We would like to encourage local civil defence organizations to publicize their preparedness and availability for any type of disaster. We hope that nuclear war will never occur, but there is no guarantee that the present international climate will not degenerate into cold war or actual conflict. Also we know that peacetime disasters do occur periodically and in either context civil emergency planning is a good insurance policy. We believe that as long as military defence is required so too will civil defence be required.

Civil defence planning is still being actively pursued in the United Kingdom and the United States and other NATO countries, and there is continued close consultation between the NATO countries, including Canada, on this matter.

I believe that adequate progress is being made in civil emergency planning in Canada. Vote 20 covers the administrative costs of the emergency measures organization, including the civil defence college at Arnprior. The total staff remains modest in size, numbering approximately 90, including the staff of the 10 regional offices, and 96 at the civil defence college. Vote 25 includes the program for the provision of radiac instruments to provinces on a cost sharing basis, the provinces reimbursing 25 per cent of the cost. These instruments would be used for the detection and measuring of radioactive fallout. Again good progress has been made, with six provinces having agreed to participate in the new program.

Vote 30, which provides for financial assistance programs to the provinces and from them to the municipalities, indicates a slight increase over last year. I believe that the provinces are progressing satisfactorily in this field. I may say we are pleased to note that there is a greater tendency in the provinces to group municipalities into larger county organizations, which the federal emergency organization encourages as it provides for a more efficient and economic organization.

To ensure the continued adequacy and effectiveness of civil defence preparations, the emergency measures organization and national defence have reviewed the effective decision to increase the emphasis on purely military training in relation to the militia. It will be recalled that the regular army will have as its second role responsibility for preparing for civil defence operation. As stated in the terms of reference of the Suttie committee, and I quote:

> It must be recognized that in the event of an all-out nuclear war, all military forces would be employed on survival operations. Therefore, the militia, with all available regulars, would be required to provide a framework for the conduct of survival operations, using a large number of civilians.

The terms of reference also state that the militia will assist in fulfilling the army's national survival responsibilities. On the basis of the latest assumptions and requirements, national defence will continue to maintain or improve:

(i) the warning system against possible enemy attacks;

(ii) the system for the location of nuclear detonations in likely target areas and the forecasting and determining of fallout and warning to the public;

(iii) its plans for re-entry operations into damaged areas or areas of serious fallout;

(iv) the emergency government communications network, which is part of the peacetime Canadian army signal system. A survey will be carried out in the near future, under the direction of the emergency measures organization, to prepare plans for the provision of regional emergency government headquarters in the four provinces where these are not already available, New Brunswick, Saskatchewan, Prince Edward Island and Newfoundland. The completion of these headquarters will then permit the installation of the communications equipment, most of which has already been acquired.

The Canadian army, through its command and area headquarters, will maintain emergency readiness plans up to date, so that all units of the regular army and militia would be capable of carrying out survival operations on short notice. It is intended to include the necessary funds to continue the implementation of such a program in the national defence five year budgetary estimates.

The fourth report of the special committee on defence, I am pleased to see, contains chapter 3 which has been devoted entirely to civil emergency planning. We have noted the recommendations of the committee. I should like to review briefly these recommendations. I would agree generally with the three aims stated for the emergency measures organization by the committee in paragraph 30, that is, to help insure continuity of civilian government, the identification and allocation of resources after an attack, and that the civilian population be informed and able to make use of any existing protective facilities.

I concur with the statement in paragraph 31 to the effect that a fundamental task is to ensure the availability of an effective communications system across the country in the event of an emergency. To ensure such communications in protected facilities in all provinces, we are considering the completion of the regional headquarters network in the remaining four provinces of New Brunswick, Saskatchewan, Prince Edward Island and Newfoundland. Also discussions

are being continued with all communications companies to ensure maximum utilization of all networks in an emergency.

Although, as stated in paragraph 32 of the report, it would be desirable to have a civil defence organization in all municipalities, I am not satisfied that we should consider it a priority. The important aspect at this time is to provide a capability in and around larger populated areas, making maximum use of the funds available through the financial assistance program. Such larger municipalities could provide assistance to smaller ones as required, whether in peacetime or wartime disasters. Also, it is our belief that planning is more effective and economical if smaller municipalities are grouped into county organizations.

As stated in paragraph 33 of the report, and I quote:

> It is important that the responsibilities and the authorities at each level of government be defined under these varying conditions.

With regard to peacetime disasters, and in respect of this definition of responsibility, a very careful study was initiated some time ago and we are now consulting informally with the provinces and comparing notes with the United States. Specific recommendations can be expected to emerge from these discussions.

With regard to wartime responsibilities, the emergency measures organization has had under discussion with all departments and all provinces for some time a specific outline of division of responsibilities. Work in this direction will continue.

With reference to the further observation in the report of the committee that there has not been a meeting of the federal-provincial conference on emergency measures since December, 1962, I must say this statement is correct. Now that the government has reviewed its policy and prepared a program on a basis of priorities, it is our belief that the time is opportune to hold a federal-provincial conference. I am proposing that such a conference be held in mid February of 1965. It is my belief that with adequate preparation made prior to the conference, it should be the best and most successful yet held.

It was observed also that there has been no national exercise for a number of years. It is true that the last national exercise was held in November, 1961. Preparations were made for a TOCSIN exercise in 1963, but it was not actually held. However, all studies made for the exercise, preparations and reporting, were carried through as if there had been an exercise. A thorough review was made on the results obtained. We are satisfied that the main aims of the exercise were met, that is, a compilation of the resources remaining at 48 hours after an attack, a review of war books and a review of emergency legislation and other similar objectives. Furthermore, studies by the provinces or by the federal emergency measures organization, in close collaboration with the provinces, are carried on on a continuing basis. As a matter of fact, we believe that the time has come to establish a cycle of exercises, starting at the municipal level, through to regional or provincial and finally the central level. This allows for a much better identification and analysis of problems at each level, especially those requiring decision at the national level.

With respect to the statement in the report that this lack of continuing liaison and exercise with the provinces has seriously impaired the validity of the planning, I regret to say that I cannot entirely agree. There has been during the period a close and continuing collaboration with the provinces although there has, as I mentioned earlier, been no formal federal-provincial conference. There has, however, been no lack of continuing discussion, dialogue and liaison. This indeed has been sufficiently successful to warrant the holding of the proposed federal-provincial conference next February.

Reference was made to the fact that the home shelter program has not been successful. Members of the committee will recall that this was a view put forward by the emergency measures organization itself. However, although the invitation to construct home shelters at individual expense has not been taken up by the general public, we do not believe that the government should discontinue to make available C.M.H.C. loans to those individuals who may wish to build a home shelter for their families. These, I would remind the committee, are only loans.

No effort will be made in the future to stimulate such a program, but I believe we should make literature available to those who request it. This can be done at very little cost to the government. Already the E.M.O. has made available, in its literature, the necessary information to provide home protection quickly with materials at hand. A pamphlet called "Simpler Shelter" is ready for distribution if the situation so warrants and the public interest demands. I believe it would be wise to continue a modest research program in this field.

However, the answer to the fallout problem appears to be the provision of public fallout shelters in existing buildings. Although we cannot yet evaluate the costs of modifications to buildings, on the basis of a survey completed in Alberta we can estimate that it would cost approximately 5 cents per head of the population to carry out a national fallout shelter survey across Canada, for a total of approximately $800,000.

All federal buildings have already been surveyed and over 1 million spaces have been identified. We are hopeful that a national survey of all large buildings will identify enough spaces to provide protection to a good percentage of the population, and this at a reasonable cost. However, before initiating such a national survey the conclusions of the Alberta survey will be very carefully considered.

As recommended in paragraph 37, expenditures in civil emergency planning should be limited generally to priorities outlined to the special committee on defence for communications, warning system, central planning function, field coordinating agencies, and research on fallout and blast protection and, as stated above, fallout protection for the public if this is found to be relatively inexpensive. I can, therefore, state with confidence that the E.M.O. is in general agreement with the special committee on defence.

The staff of the organization and I were pleased to appear before the committee and would like to express our appreciation to its members for the time they devoted to this difficult but important program. I would recommend to hon. members that the estimates for E.M.O. be approved so that civil emergency planning may be adequately carried out in Canada.

Conclusion:—

EDITOR'S NOTE: *Presentation of this statement was followed by remarks and questions by the Honourable Marcel Lambert (P.C.—Edmonton, West). At 10:00 p.m. the House rose before completion of the debate.*

DEFENCE REPORT

Excerpt of Text Submitted to Special Committee on Defence by the HONOURABLE LUCIEN CARDIN, *Associate Minister of National Defence, dated 21st July, 1964, taken from Minutes of Proceedings and Evidence, Vol. 13.*

"I would like to turn now to national survival. The responsibilities and tasks of the army in national survival have not changed. The army continues to have a responsibility for the re-entry of damaged areas and areas of serious fall-out, as stated in privy council order 656 of 1959. In peacetime the regular army maintains, at a state of readiness compatible with world conditions, the national survival attack warning system; the nuclear detonation and fallout reporting system; and the operation of emergency communication facilities. Plans are made and are kept up to date so that they could be activated fully in time of emergency. Economy calls for manning at essential strength. This strength, while highly skilled, would be able to operate for a limited time only without relief. Therefore, to bring the whole system up to 24 hour around-the-calendar readiness that would be effective in times of emergency it would be necessary to augment the regular staffs with militia. It is planned that selected militia personnel will train with the regular cadres in peace to ensure that they would be of great help in an emergency in fulfilling this important role. Indeed in time of war they might be called upon to relieve, for service elsewhere, the broader-trained regular army personnel. It is estimated that 1,500 militia personnel will be required for this task.

A word now about re-entry operations. It is visualized that the Canadian army including regulars, militia and many civilian organizations, indeed the whole country, would become critically involved. During the past few years the regular army, in conjunction with the militia, have been developing plans and have been training to support the country in the event of nuclear attack. These plans have been developed to the point where they can be kept up to date in the various headquarters across the country. Furthermore, it has become clear that the main requirement for re-entry operations is formed and disciplined bodies of men which can adapt themselves to meet any task that may be required using large numbers of civilian volunteers. If it is ever necessary to carry out survival operations there is no doubt that the regular army and the militia, including militia not actually mobilized, would be organized and used. It has been further proven that once the basic standard of training has been reached refresher training will preserve the standard. Thus although it is planned that the militia will revert to its military corps skills training programme they will be effective and available for survival operations should the need arise. Moreover, if the regular field force were sent out of Canada to meet our NATO commitments, this would provide further justification for the militia organization to replace these forces. National survival is still a priority within the overall concept I have described. Both the regular army and the militia have the know-how, the adaptability and the equipment to support re-entry operations if required. In addition there will be no degradation in the army's capability to perform its allotted tasks in relation to:

(*a*) The nuclear detonation and fallout reporting system.

(*b*) The national survival attack warning system.

(*c*) Damage and casualty assessment.

(*d*) Maintenance and operation of emergency communication facilities.

It must be emphasized that in the event of an all-out nuclear war, all military forces and other organizations would be employed in survival operations." ●